The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WEN-YIH LIAO,
CHIEN-LIANG HUANG, CHUEN-FUN YAN,
HUEI-WEN YANG, TZUAN-REN JENG,
DER-RAY HUANG, ANDREW TEH HU,
MING-CHIA LEE and CHUNG-CHUN LEE

Appeal No. 2006-0585
Application No. 09/917,751

ON BRIEF

Before KIMLIN, GARRIS, and TIMM, Administrative Patent Judges.

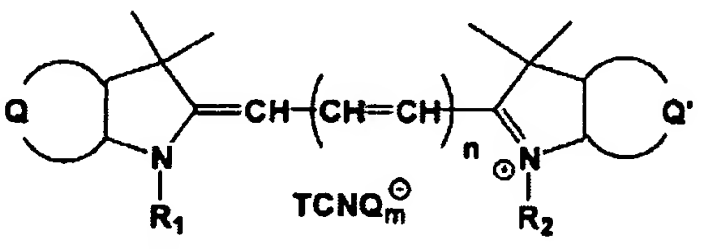
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal which involves claims 30-49.

The subject matter on appeal relates to a data storage media which includes a recording layer containing a mixture of a first and second cyanine dye-TCNQ complex having particular formulas. Further details of this appealed subject matter are set forth in representative independent claim 40 which reads as follows:

40. A data storage media including a substrate and a recording layer, said recording layer containing uniformly distributed in said layer a mixture of at least a first and second cyanine dye-TCNQ complex; said first cyanine dye-TCNQ complex having a formula (II):



(II)

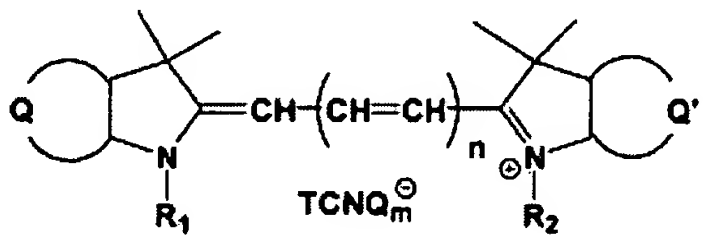
wherein Q and Q' each form a six-membered carbon containing aromatic ring;

R_1 is $-CH_2C_6H_4COOCH_3$;

R_2 is an alkyl group;

TCNQ is 7,7',8,8'-tetracyanoquinodimethane;

m and n are each 1; said second cyanine dye-TCNQ complex having a formula (IV)



(IV)

wherein Q and Q' each form a six membered carbon containing aromatic ring;

R_1 is $-CH_2C_6H_4COOCH_3$;

R_2 is $CH_2C_6H_4COOCH_3$;

n is an integer of 2;

m is 1; and the weight percentage of complex (IV) to complex (II) is from 0.5 to about 20%.

The references set forth below are relied upon by the examiner as evidence of obviousness:

Sato et al. (Sato)	4,735,839	Apr. 5, 1988
Cho et al. (Cho)	5,579,150	Nov. 26, 1996
Liao et al. (Liao)	5,958,087	Sep. 28, 1999
Ishida et al. (Ishida)	5,998,094	Dec. 7, 1999

Claims 30-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Liao taken with Cho in view of Sato alone or further in view of Ishida.[1]

Rather than reiterate the respective positions advocated by the appellants and by the examiner, we refer to the brief and to the answer for a complete exposition thereof.

OPINION

We will sustain these rejections for the reasons well stated in the answer. We add the following comments for emphasis.

With respect to the examiner's proposed combination of Liao and Cho, the appellants advance the following argument on page 6 of their brief:

> In the formula (I) of Cho et al., R represents a heteroaromatic residue and R' represents alkyl; η represents a positive integer not less than 2. Clearly, one of ordinary skill in the art would appreciate the unequivocal teaching in Cho et al that η must be at least 2 and R' alkyl. Therefore, one of ordinary skill in the art would not combine the teachings of Liao et al and Cho et al to arrive at the presently claimed data storage media as the necessary motivation to make the modifications to the structural formula is not present, other than in appellants' specification which may not be used as a teaching reference. Clearly, Liao et al. states that the

[1] The claims on appeal have not been separately argued in the manner required by 37 CFR § 41.37(c)(1)(vii)(Sept. 13, 2004). Therefore, in our disposition of this appeal, we have focused on independent claim 40 (since this is the broadest claim before us) with which all other claims will stand or fall.

> R substituents must be identical and are each a 4-methoxycarbonybenzyl group. One of ordinary skill in the art would appreciate this teaching and understand that they may not be alkyl. That is both are required to be 4-methoxycarbonylbenzyl to obtain the results of the invention. Cho et al on the contrary, teach that the corresponding substituent both are alkyl and n must be 2.

We cannot agree with the appellants that these distinctions between the teachings of Liao and Cho would have militated against combining the respective reference teachings in the manner proposed by the examiner. As correctly indicated by the examiner (e.g., see page 7 of the answer), the fact that one of Liao's cyanine dyes corresponds to n=1 in the generic formula whereas the cyanine dyes of Cho correspond to n=2 or more would have been recognized by an artisan as relating to a difference involving wavelength absorption only. Therefore, this distinction would not have discouraged the artisan from combining the cyanine dye structures of Liao with the TCNQ complex of Cho in order to obtain the benefits taught by Cho as more fully explained in the answer (e.g., see the paragraph bridging pages 4-5). For similar reasons, this combination would not have been discouraged by the fact that the respective cyanine dyes of Liao and Cho include different R substituents for the nitrogen atom.

In this later regard, the appellants argue that these R substituents for Liao's cyanine dyes must be identical and accordingly that it would not have been obvious to substitute an alkyl for one of these R substituents on patentee's trimethine indolenic cyanine dye (i.e., n=1) to obtain the benefits of unsymmetry taught by Sato in accordance with the examiner's rejection. This is incorrect. While Liao's aforementioned R substituents are disclosed as being identical, this reference contains no teachings or suggestion in support of the appellants' contention that "the R substituents must be identical and this is necessary to obtain the results of the invention" (brief, page 5). Therefore, we fully agree with the examiner's conclusion that an artisan would have

been motivated to make the previously discussed substituent replacement in order to obtain unsymmetry and the attendant solubility improvements taught by Sato.

For the reasons set forth above and in the answer, it is our determination that the examiner has established a prima facie case of obviousness with respect to his proposed combination of the Liao, Cho and Sato teachings, thereby resulting in a data storage media which satisfies the requirements of representative independent claim 40. At this point, it is appropriate to acknowledge that the appellants' brief includes undeveloped assertions to the effect that their disclosed and claimed dyes possess certain "advantages" (brief, page 10). However, it is significant that the appellants do not characterize these advantages as being unexpected, thus evincing nonobviousness, with respect to the applied prior art discussed above. More importantly, in the evidence appendix filed (i.e., via facsimile transmission) December 5, 2005 pursuant to 37 CFR § 41.37(c)(1)(ix), it is clearly indicated that no evidence is relied upon by the appellants in the subject appeal. For these reasons, we consider the appellants' brief to present argument but no evidence in opposition to the examiner's obviousness conclusion.

As previously indicated, we are unpersuaded by the appellants' arguments for obviousness. We hereby sustain, therefore, the examiner's § 103 rejection of claims 30-49 as being unpatentable over Liao taken with Cho in view of Sato. For analogous reasons, we also hereby sustain the examiner's alternative § 103 rejection of claims 30-49 as being unpatentable over the aforementioned references and further in view of Ishida.[2]

The decision of the examiner is affirmed.

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[2] A discussion of the Ishida reference is unnecessary for purposes of resolving this appeal.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

Edward C. Kimlin)
Administrative Patent Judge)
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Bradley R. Garris) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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)
Catherine Timm)
Administrative Patent Judge)

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